




UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,990	09/03/2002	Normand Bedard	218239US2PCT	9183
22850	7590	03/18/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>10/030,990</p>	<p>Applicant(s)</p> <p>BEDARD ET AL.</p>	
	<p>Examiner</p> <p>Philip H Leung</p>	<p>Art Unit</p> <p>3742</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date <u>9-3-02</u>.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: ____.</p> |
|--|---|

DETAILED ACTION

1. The drawings filed on 9/03/2002 are acceptable.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wild-Barfield (BE 497 198) (cited by the applicant), in view of Dickens et al (US 5,528,020) or Dickens et al (US 5,227,597).

Wild-Barfield shows an infrared heat system including a surface consisting of an induction-responsive material (metal envelope or shell, page 1, lines 13-16 or sleeve, page 2, line 26-30) capable of withstanding high temperatures (page 2, lines 48-49), a heat insulating layer applied to the surface (thermal insulation 4, page 3, lines 48-49), a field winding adjacent the insulating layer (solenoid 2, page 3, lines 43-44) and separated from the surface by the

Art Unit: 3742

insulating layer. It differs from the claimed heater in that a field concentrator is located adjacent the field winding. Dickens '020 shows an induction plate heater including a plurality of plates sandwiching an induction heating coil and a flux concentrator located adjacent the induction heating coils 22, 28 to produce a greater concentration of the magnetic flux in heater plates 40 and 42 (see Figures 1 and 9-11 and col. 5, lines 26-67). Dickens '597 also shows an induction plate heater having plates and an induction coil 4 with concentrator bars 40 near the coil to increase the flux coupling to the plate of magnetic material (see Figures 1-5 and col. 7, lines 44-66. It would have been obvious to one of ordinary skill in the art to modify Wild-Barfield to provide a field concentrator adjacent the induction heating coil in order to direct the magnetic field onto the heating plate for better heating efficiency and more uniform heating result, in view of the teaching of Dickens '020 or Dickens, '597. In regard to claim 2, Wild-Barfield, Dickens '020 and Dickens 597 all shows heating material in an the form of a plate. In regard to claim 3, Dickens '597 shows the plate of composite materials (see Figure 3). In regard to claims 4, 6, 7, and 11, the exact material and the thickness of the heating plate would have been a matter of engineering design variations depending on the exact material to be heated and the heating temperature and can be determined by an ordinary artisan (see for example, Dickens '597, Figures 8 and 9 and col. 5, line 5 – col. 7, line 26). In regard to claims 8 and 9, the use of water cooled copper tube as the induction coil is the most common standard in the art and the use of Litz cable as the inductor is also well known as shown in Dickens '020 (see col. 2, lines 13-24 and col. 4, lines 24-33) or Dickens '597 (see col. 7, lines 27-36). In regard to claim 12, the use of a heating matrix including carbon fibers as the induction heatable material is well known in the art (see paragraph below).

Art Unit: 3742

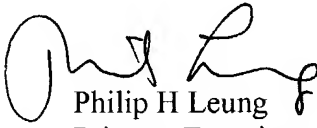
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miller et al (US 5,240,542) is further cited to show an induction heating device having an induction responsive composite matrix material 34 with carbon fibers 32 and a water cooled copper tube as the induction heating coil 22 (see Figures 1 and 3 and col. 2, lines 20-27 and col. 5, 34-32).

5. The status letter dated 2/27/2004 is deemed to be moot in view of this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (703) 308-1710.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (703) 308-2634. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
3-15-2004